

FIGURE 3 (continued)

30% NaOH @ 25°C

	<u>Cum. Mg/dm² (approx.)</u>	
	24 Hours	120 Hours
AD90	24.98	51.15
AD94	15.24	32.27
AD96	2.13	6.10
ADO96	11.59	14.61
AD99.5	8.23	12.20
TTZ	0.61	0.61
LTHA Sample	1.72	2.01

NOTE: Weight loss is mg/dm²/day, rounded to nearest 0.01g.

Materials Corrosion Test:

	<u>Weight loss in mg/cm²/day</u>	
	<u>60% H₃PO₄ @ 60°C</u>	<u>30% NaOH @ 60°C</u>
A479 Al ₂ O ₃ (90%)	0.15	0.28
A479SS Al ₂ O ₃ (99.5%)	0.07	0.12
3NaAl ₂ O ₃ (99.9%)	0.02	0.00
LTHA Sample	0.00	0.00

NOTE: Weight loss is mg/cm²/day, rounded to nearest 0.01g.

**High Alumina Corrosion Test:
Independent Test**

<u>CORROSIVE SOLUTION</u>	<u>HCl</u>	<u>HNO₃</u>	<u>H₂SO₄</u>
<u>MATERIAL</u>	<u>% WEIGHT LOSS</u>		
Product of Manufacturer A:			
85% Al ₂ O ₃	0.066	0.076	0.066
96% Al ₂ O ₃	0.081	0.087	0.200
LTHA Sample	(No Detectable Loss)		
Product of Manufacturer B:			
99.5% Al ₂ O ₃	0.217	0.163	0.216

PROCEDURES

1. Check the initial weight (approximately 5 grams)
2. Immerse into high concentration acid/base solutions
3. Dilute with 50 volume % of distilled water
4. Boil for an hour, and let soak overnight
5. Check the final weight
6. Calculate percent weight loss

$$\% \text{ LOSS} = (\text{INITIAL WEIGHT} - \text{FINAL WEIGHT}) / \text{INITIAL WEIGHT}$$

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